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COPY 1 OF 1

Westinghouse

ELECTRIC CORPORATION

AIR ARM DIVISION

PHONE: LINTHICUM 1000
FRIENDSHIP INT'L AIRPORT
BOX 746, BALTIMORE 3, MD.

15 May 1958

25X1 [redacted]

SUBJECT: Contract TA-3034
Westinghouse Reference AAD-30465
Monthly Progress Report #11

In accordance with Item 3 of the subject contract, forwarded herewith are three (3) copies of Monthly Progress Report #11 on the Terrain Avoidance Radar System for the period from 31 March 1958 to 30 April 1958.

A copy of this report is being sent direct to

25X1 [redacted] of WADC.

25X1 [redacted]

25X1 Sales Engineer

[redacted]

...nd 2 copies to [redacted]
orig Report + Ltr to [redacted]
contract.
T+P TA-3034

25X1 8 MAY 27 AM 9:02

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MONTHLY PROGRESS REPORT #11

on the

TERRAIN AVOIDANCE RADAR SYSTEM

For the period from

March 31, 1958 to April 30, 1958

G.O. AAD - 30465

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WESTINGHOUSE ELECTRIC CORP.

Air Arm Division

P.O. BOX 746

Baltimore 3, Maryland

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MONTHLY PROGRESS REPORT #11

ON THE

TERRAIN AVOIDANCE RADAR SYSTEM

For the period from

March 31, 1958 to APRIL 30, 1958

Construction of all units of the Terrain Avoidance Radar System, except for the antenna, has been completed. Bench testing of the pre-amp, post-amp, AFC, Modulator, and control panel has been completed, and bench tests of the balance of units are in progress.

To avoid an overexpenditure of contract funds because of the greater than anticipated cost of antenna development, it has been mutually agreed between the Government and Westinghouse to stop antenna development at Phase II, which has resulted in a satisfactory 30" antenna with a beamwidth of 1.75° and a 35° sector scan, suitable for breadboard operation. It was further agreed to eliminate environmental testing of the radar in a supplementary effort to conserve contract funds.

Antenna development of the smaller Phase III antenna of similar design was expected to have resulted in a 16" reflector with a beamwidth of 2° and a 30° sector scan. Development of this Phase III antenna will be discontinued on this contract to conserve funds, largely overexpended by the development cost of the rolled up feedhorn which has involved expensive machining. However, although the machining of a satisfactory development model is costly, the expense of production models would be substantially reduced through the use of castings.

The breadboard system has been satisfactorily operated in the roof laboratory with the Phase II model of the antenna incorporated.

The intensity of the "X" scope presentation is not as bright as might be desired, but some further improvement should be realized when the final optical system is incorporated since it will have larger aperture lenses.

The unusually "spotty" nature of the "X" scope sweep traces was found to be caused by excessive 400 cycle hum modulation in the breadboard video circuitry. Additional filtering is being incorporated to eliminate this fault.

Roof-lab evaluation of the breadboard will be continued while units of the final model are being checked out in preparation for the composite bench test of the final model system.

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STATUS OF TERRAIN AVOIDANCE RADAR APR. 30, 1958